CLAIMS

We claim:

1. A control arrangement for a pull-type windrow merger adapted to be pulled by a tow vehicle having an electrical power supply, the pull-type merger having a plurality of actuable functional assemblies configured to interact and cooperate to selectively collect and discharge crop material with respect to the ground, the control assembly comprising;

a housing;

a controller disposed in the housing; and

a harness arrangement configured to electrically connect the controller to the plurality of functional assemblies and to a power supply,

wherein

the controller and the housing are remotely disposed relative to the pull-type windrow merger.

2. The control arrangement of claim 1, wherein the harness arrangement is configured to electrically connect the controller to the power supply.

3. The control assembly of claim 1, wherein the harness arrangement includes a first harness having:

a first connector configured to electrically connect to the controller;

a second connector configured to electrically connect the control arrangement to the power supply; and

a third connector configured to electrical connect to the plurality of functional assemblies on the pull type merger.

4. The control arrangement of claim 3, wherein the harness arrangement includes a second harness configured to communicate control signals from the controller to the merger.

5. The control arrangement of claim 4, further including:

a hydraulic manifold disposed on the merger, the hydraulic manifold having a one or more solenoid valves configured to drive operation of the one or more

functional assemblies, wherein the harness arrangement communicates control signal from the controller to the one or more solenoid valves.

6. The control arrangement of claim 1, wherein the hydraulic manifold includes an additional connector configured to communicate control signals from the controller to a second hydraulic manifold of one or more solenoid valves.

7. The control arrangement of claim 1, wherein the controller includes a main switch configured to activate the control arrangement.

8. The control arrangement of claim 1, wherein the controller and housing are disposed on the tow vehicle.

9. The control arrangement of claim 1, wherein the controller includes a multiple input switches, each input switch configured to control operation of one of the multiple functional assemblies of the pull-type merger.

10. A windrow merger pulled by a tow vehicle, comprising:

a frame;

a wheel assembly configured to support the frame;

at least one functional assembly supported by the frame, the at least one functional assembly configured to selectively collect and discharge crop material;

a control arrangement having a controller mounted on the tow vehicle, wherein the controller is configured to control operation of the at least one functional assembly.

11. The windrow merger of claim 10, wherein the at least one functional assembly includes a lift assembly configured to raise or lower the merger relative to the ground.

12. The windrow merger of claim 10, wherein the at least one functional assembly includes a tow assembly having a tow arm configured to swing the merger in or out with respect to the tow vehicle.

13. The windrow merger of claim 10, wherein the at least one functional assembly includes a conveyor assembly having

a conveyor belt; and

a conveyor drive assembly, wherein the conveyor drive assembly is configured to direct rotation of the conveyor belt to cause collected crop material to selectively discharge toward a left or a right direction relative to the merger.

14. The windrow merger of claim 10, wherein the at least one functional assembly includes a speed control assembly configured to vary an operating speed of the merger.

15. The windrow merger of claim 10, wherein the at least one functional assembly includes a bed shift assembly configured to selectively change a position of the conveyor belt relative to the merger.

16. The windrow merger of claim 10, wherein the at least one functional assembly includes an extension assembly having

an extension conveyor having a discharge end; and

an extension lift assembly configured to raise or lower the discharge end relative to the conveyor belt of the conveyor assembly.

17. The windrow merger of claim 10, wherein the control assembly further includes:

a harness arrangement configured to electrically connect the controller to the at least one functional assembly.

18. The windrow merger of claim 17, wherein the harness arrangement is configured to electrically connect the controller to an electrical power supply.

19. The windrow merger of claim 18, wherein the control assembly further includes a hydraulic manifold having at least one solenoid valve configured to control the hydraulic output to drive a respective functional assembly.

20. The windrow merger of claim 18, wherein the harness arrangement communicates control signals from the controller to the at least one solenoid valve of the hydraulic manifold.

21. A method of controlling operation of a pull-type windrow merger having a plurality of actuable functional systems and adapted to be towed by a tow vehicle having an operator's cab, comprising the steps of:

positioning a controller in the cab of the tow vehicle; and

interconnecting the controller with the functional systems of the windrow merger;

wherein the controller includes a plurality of switches that are operable to control operation of the functional systems of the windrow merger.

22. The method of claim 21, wherein the step of interconnecting the controller with the functional systems of the windrow merger is carried out by providing each of the functional systems of the merger with an electrically operated control member that interfaces with a hydraulic power supply arrangement that selectively delivers hydraulic power to the functional systems of the merger, and interconnecting the controller with each of the electrically operated control members.

23. The method of claim 22, wherein the step of providing each of the functional systems of the merger with an electrically operated control member is carried out by mounting the control members to a hydraulic manifold that controls the delivery of hydraulic power to the functional systems of the merger in response to actuation of the controller.